

**A RESOLUTION BY  
CITY UTILITIES COMMITTEE**

**05- R -1715**

A RESOLUTION AUTHORIZING THE MAYOR OR DESIGNEE TO ISSUE A NOTICE-TO- PROCEED WITH SHAW ENVIRONMENTAL, INC. / AIM PARTNER, PLC, JOINT VENTURE, FOR FC-7619-03F, ANNUAL CONTRACT FOR ARCHITECTURAL AND ENGINEERING SERVICES FOR REPLACEMENT EFFORTS OF THE POWERS FERRY ROAD BRIDGE OVER NANCY CREEK, ON BEHALF OF THE DEPARTMENT OF PUBLIC WORKS IN AN AMOUNT NOT TO EXCEED THREE HUNDRED SEVENTY FOUR THOUSAND SEVEN HUNDRED NINETEEN DOLLARS AND SIXTY SEVEN CENTS (\$374,719.67). ALL CONTRACTED WORK SHALL BE CHARGED TO AND PAID FROM VARIOUS FUND ACCOUNT AND CENTER NUMBER: 1C45 (2001 QUALITY OF LIFE FD) 574001 (FAC. OTHER THAN BUILDINGS) M23F071392BG (POWERS FERRY RD BRIDGE REPLACEMENT).

**WHEREAS**, the City of Atlanta (the "City") did enter into FC-7619-03F, Annual Contract for Architectural and Engineering Services; and

**WHEREAS**, the Commissioner of the Department of Public Works requires Architectural and Engineering Services for the Replacement Efforts of the Powers Ferry Road Bridge over Nancy Creek in the amount not to exceed Three Hundred Seventy Four Thousand Seven Hundred Nineteen Dollars and Sixty Seven Cents (\$374,719.67); and

**WHEREAS**, the Commissioner of the Department of Public Works and the Chief Procurement Officer for the Department of Procurement have recommended Shaw Environmental, Inc./ AIM Partner, PLC, Joint Venture, to provide Architectural and Engineering Services for Replacement Efforts of the Powers Ferry Road Bridge over Nancy Creek.

**NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF ATLANTA, GEORGIA**, that the Mayor be and is hereby authorized to approve a notice-to-proceed with Shaw Environmental, Inc. / AIM Partner, PLC, Joint Venture, for FC-7619-03F, Annual Contract for Architectural and Engineering Services; in the amount not to exceed Three Hundred Seventy Four Thousand Seven Hundred Nineteen Dollars and Sixty Seven Cents (\$374,719.67).

**BE IT FURTHER RESOLVED**, that the Chief Procurement Officer be and is hereby directed to prepare an appropriate agreement for execution by the Mayor to be approved by the City Attorney as to form.

**BE IT FURTHER RESOLVED**, that this notice-to-proceed should not become binding on the City, and the City shall incur no liability upon same until such contract has been executed by the Mayor and delivered to the contracting party.

**BE IT FINALLY RESOLVED**, that all services for said notice-to-proceed shall be charged to and paid from fund account and center number: 1C45 (2001 QUALITY OF LIFE FD) 574001 (FAC. OTHER THAN BUILDINGS) M23F071392BG (POWERS FERRY RD BRIDGE REPLACEMENT).

8/30/05 DOP (ADS)

**DEPARTMENT OF PROCUREMENT  
LEGISLATION SUMMARY**

**A RESOLUTION BY  
CITY UTILITIES COMMITTEE**

A RESOLUTION AUTHORIZING THE MAYOR OR DESIGNEE TO ISSUE A NOTICE-TO-PROCEED WITH SHAW ENVIRONMENTAL, INC. / AIM PARTNER, PLC, JOINT VENTURE, FOR FC-7619-03F, ANNUAL CONTRACT FOR ARCHITECTURAL AND ENGINEERING SERVICES FOR REPLACEMENT EFFORTS OF THE POWERS FERRY ROAD BRIDGE OVER NANCY CREEK, ON BEHALF OF THE DEPARTMENT OF PUBLIC WORKS IN AN AMOUNT NOT TO EXCEED THREE HUNDRED SEVENTY FOUR THOUSAND SEVEN HUNDRED NINETEEN DOLLARS AND SIXTY SEVEN CENTS (\$374,719.67). ALL CONTRACTED WORK SHALL BE CHARGED TO AND PAID FROM VARIOUS FUND ACCOUNT AND CENTER NUMBER: 1C45 (2001 QUALITY OF LIFE FD) 574001 (FAC. OTHER THAN BUILDINGS) M23F071392BG (POWERS FERRY RD BRIDGE REPLACEMENT).

<b>REQUESTING DEPARTMENT:</b>	Department of Public Works
<b>CONTRACT TYPE:</b>	Professional Services
<b>AWARDEES:</b>	(1) CH2M Hill/Williams-Russell and Johnson (2) Atlanta Services Group (3) JP2 (Jacobs, Prad, PBS&J) (4) Shaw/ Aim, Joint Venture (5) Metcalf & Eddy/Cardozo Engineering, Joint Venture (6) Arcadis/Brindley Pieters & Associates, Joint Venture
<b>SOURCE SELECTION:</b>	RFP
<b>PROPOSALS DUE:</b>	January 7, 2004
<b>INVITATIONS MAILED:</b>	146
<b>PROPOSALS RECEIVED:</b>	12
<b>PROPONENTS:</b>	Arcadis/BPA-(Brindley Pieters & Associates) – Joint Venture  Atlanta Architects & Engineers, Joint Venture  Atlanta Services Group, a Joint Venture  Infrastructure Partners-Joint Venture (B & E Jackson/HDR/Malcom Pirnie) Brown and Caldwell/Deloan Hampton & Associatees/Long Engineering Inc. - Joint Venture  CH2M Hill/Williams-Russell and Johnson – Joint Venture

Earthtech/IMCo Joint Venture

HTL - Harrington, Tetra Tech & Lowe-Joint Venture

JP<sup>2</sup> (Jacobs, Prad, PBS&J) – Joint Venture

Metcalf & Eddy/Cardozo Engineering-Joint Venture

Parsons Brinckerhoff & Khafra-Joint Venture

Shaw Environmental Inc. /AIM Partners, PLC- JV

**BACKGROUND:**

THIS TASK ORDER IS REQUIRED FOR THE REPLACEMENT EFFORTS OF THE POWERS FERRY ROAD BRIDGE OVER NANCY CREEK, AS PART OF THE QUALITY OF LIFE (“QOL”) BOND ISSUE PASSED TO FINANCE PART OF THE CAPITAL IMPROVEMENT PROGRAM WITHIN THE DEPARTMENT OF PUBLIC WORKS. IN ADDITION, IT WILL ENABLE QOL TO CARRY OUT ITS OBJECTIVE TO DEVELOP AND PRESERVE AREAS AND TRANSPORTATION WAYS THAT ENCOURAGE NEIGHBORHOOD LIVABILITY, PEDESTRIAN MOBILITY AND A GENERAL IMPROVEMENT OF THE QUALITY OF LIFE IN OUR URBAN SETTING.

**EVALUATION TEAM  
COMPOSITION:**

DPRCA, DWM, DPW, DPCD, OGA, OCC and Risk Management

**PROJECT  
PARTICIPATION:**

Shaw Environmental & Infrastructure, Inc./AIM Partners, PLC a JV (15 pts.)

AIM Partners	AABE 20%
Benchmark Management, LLC	AABE 5%
Cheeks/Hornbein Architects	AABE 5%
The Mosby Law Group	AABE 2%
Precision Engineering & Surveying	AABE 2%
Neil Engineering, Inc.	FBE 10%
<u>Environmental Resource Services, Inc.</u>	<u>FBE 4%</u>
<b>Participation Total</b>	<b>48%</b>



## CITY OF ATLANTA

SHIRLEY FRANKLIN  
MAYOR

55 TRINITY AVE., SW, ATLANTA, GEORGIA 30303-0324  
SUITE 4700, CITY HALL - SOUTH  
(404) 330-6240  
FAX (404) 658-7552  
email: publicworks@atlantaga.gov

DEPARTMENT OF PUBLIC WORKS

David E. Scott, P.E.  
Commissioner

CITY OF ATLANTA  
DEPT. OF PROCUREMENT  
2005 AUG 26 PM 4:13

### MEMORANDUM FOR: PROCESSING OF TASK ORDER

DATE: August 26, 2005

TO: Adam L. Smith, Chief Procurement Officer  
Department of Procurement

FROM: David E. Scott, P.E, Commissioner  
Department of Public Works

SUB: Task Order #3 to: FC-7619-03F - Annual Contract for: Architectural and  
Engineering Services  
Contractor: Shaw Environmental, Inc. & AIM Partners, PLC

#### A. DESCRIPTION OF TASK ORDER

The Department of Pubic Works (DPW) on behalf of the Quality of Life Bond Program (QOL) requests the processing (Legislation Preparation and NTP) of Task Order #3 of Contract No. FC-7619-03F for the following "Scope of Work" – **Replacement efforts of the Powers Ferry Road Bridge over Nancy Creek, as further described in the attached.**

#### B. NEED FOR TASK ORDER

This Task Order is required for the replacement efforts of the Powers Ferry Road Bridge over Nancy Creek, as part of the Quality of Life Bond Issue passed to finance part of the Capitol Improvement Program within the Department of Public Works. In addition, it will enable QOL to carry out its objective to develop and preserve areas and transportation ways that encourage neighborhood livability, pedestrian mobility and a general improvement of the quality of life in our urban setting.

### **C. TASK ORDER FEE**

The total project fee amount is \$347,719.67. Attached is the Cost Proposal, which should be in line with the provisions of the contract.

### **D. PERFORMANCE INFORMATION**

NA.

If additional information is needed, please feel free to contact Sharon Gardner at Ext. 6578.

DES/sg

Attachments:

1. Scope of Work
2. Cost Proposal
3. Requisition

cc: David Ferguson, Department of Public Works  
Sandra Jennings, Department of Public Works  
Althea Smith, Department of Public Works  
Madelyn Grant, Department of Public Works  
**Billy Mitchell, Department of Public Works – Contact-Ext. 6861**  
Dawn Riley, Department of Public Works  
Carl Hall/Anthony Stanley, Department of Procurement  
Sharon Gardner, Department of Public Works / File

**City Of Atlanta  
Department of Public Works  
Powers Ferry Road Bridge Replacement Project**

**Basis of Estimate**

**General**

**EXCEPTIONS:**

1. If a no-rise is unattainable for this project, a Conditional Letter of Map Revision (CLOMR) will need to be submitted. This proposal does not include the cost for submittal of CLOMR documents or their preparation.
2. No Improvements to sidewalks will be part of The Shaw-AIM Team Scope.
3. No Improvements to the existing horizontal, vertical, existing pavements outside the proposed bridge approach slab limits will be part of the Shaw-AIM scope of work.
4. We assume that no ROW acquisition will be required. Additional cost will occur should acquisition be required.

**A-01-00000-Concept**

**Objectives**

The objective of the Concept Stage is to develop a Concept Report that will describe a recommended project "footprint" including logical termini. A project recommendation will be made for a "Build Alternative" or "No-Build Alternative" that addresses the "Need and Purpose" of the programmed project after accident analysis, determination of project deficiencies, planning requirements, environmental cruise (an on-site, drive thru, screening of the project area), study of alternatives, permit requirements, social and economic considerations, utility considerations, right-of-way impacts, and other analyses have been made.

Prior to the beginning of the concept stage, the design office, as assigned by the City, will work with The Shaw-AIM Team to develop a preliminary "Need and Purpose" document for the proposed project. Some engineering may be required to complete this effort.

**A-01-10000 Concept - Kickoff Meeting with the City**

The purpose of the Kickoff Meeting is to produce a higher quality and more detailed concept for The Bridge Project, establishing lines of communications and responsibilities between the team, validate the "Need and Purpose" before working on the concept, understand the environmental scope, determine the anticipated public involvement approach, identify information that is available, define information that is needed to develop the concept, review the project schedule, and provide a transition

between planning and design. This meeting will include all parties from the City and the Design Team. The Project Manager will schedule this meeting within five days of a written Notice to Proceed.

Meeting Minutes will be recorded and submitted to the City.

#### **A-01-11000 Concept - Prepare QA/QC/Independent Plan**

This Plan will be developed according to the GDOT Plan Presentation Guide from the Georgia Quality Initiatives Program. It will be presented to the City in one simple document listing key processes from the PPG.

#### **A-01-12000 Concept - Prepare Project Management Plan**

This plan will be developed according to the GDOT Plan Presentation Guide and Plan Development Process 2000 of the GDOT and any City requirements. It will be presented to the City in one simple document listing key processes from the listed references.

#### **A-01-13000 Concept - Prepare Design Data Notebook**

Based on the approved concept, the Project Manager shall prepare a Project Design Data Book. The Project Design Data Book shall define the proposed project design parameters for the bridge, roadway and/or transportation element that will serve as a continuity resource book/abbreviated historical record, if for some reason the project gets delayed or there is a change in Project Manager or staff. Keep the purpose of the Project Design Data Book in mind when preparing the Project Design Data Book. It is not the project's correspondence file. The Concept Report will form the basis of the project data book. Copies of this document will be made available to the city at their request.

#### **A-01-15000 Concept - Data Base Preparation (Survey)**

Prior to the beginning of the field survey effort, the Project Manager shall initiate a meeting on the project site between the designer and the Survey Party Chief to review the project in the field and discuss what survey data is to be obtained and the limits of the survey effort. Among items to be discussed will be cross road surveys, bridge surveys, driveway profiles, property lines, stream surveys needed for hydraulic engineering reports, cross sections, drainage surveys, utilities, and any special features. A second meeting between the designer, survey party chief, and the bridge designer may be necessary to complete the bridge and stream surveys as the development of the preliminary bridge layouts progress. The survey and/or mapping of the project will include the information needed to accommodate the necessary project transitions, including lane tapers, at the beginning and end of the project. All field survey data will be collected in accordance with requirements of the Project Manager and the data processed utilizing the "Survey Processing Guidelines," set out by the GDOT.

The Shaw-AIM Team shall set and survey horizontal control points. A sufficient number of control points shall be set and a project network Control Sheet will be prepared. Horizontal control shall be based on the Georgia West State Plane Coordinate System. (NAD 1983). The Shaw-AIM Team shall set and survey primary and secondary vertical control points. A sufficient number of control points shall be set and a project network Control Sheet will be prepared. Vertical control shall be based on NAVD 88 datum. The Shaw-AIM Team shall reference all control points and perform Topographic/ Bridge Survey of the roadway and bridge structure, to include buildings, above ground utility features, trees, pavements, etc. The topographic survey shall also include the location of all existing manholes and investigating the make, size and direction of pipes at manholes.

Topographic/ Bridge Survey. - shall extend 200 feet from existing bridge abutment beyond both approaches of the bridge. The Shaw-AIM Team shall perform a digital Terrain Model of the Site. All survey data will be provided in Microstation and Caice. The Shaw-AIM Team shall perform 100' cross-sections to have the same coverage as the topographic survey. Existing utility shall be depicted based on as-built information and/or markings by others. The Shaw-AIM Team shall perform a sounding of the Nancy Creek at 500 feet cross-sections as follows: 2 cross-sections upstream not more than 1000 feet and 1 downstream at 500 feet:

Cross Sections – 4 stream cross-sections. If good topography exists, cross sections can extend from top of bank to top of bank with 2 additional points on both sides to tie contours in with topo. If good topo is not available, then full sections will need to be shot for entire floodplain. Two cross-sections will be required downstream of bridge (one at the bridge and one 500 feet downstream; 2 cross-sections will be required upstream of the bridge - 1 between bridge and golf cart bridge, and 1 upstream of golf cart bridge at 1000 feet. At a minimum, at least 6 points are required within the channel.

Existing Bridge Details. Detailed information on US Face and DS Face is required. This includes ground points, low chord, railing, abutments, etc. Information is required to model bridge opening. A sketch of bridge elevation will also be required. Plan view illustrating distance between bridges (golf cart bridge and Powers Ferry bridge) and meander of stream also required (see item 5 below).

Roadway Centerline. Shots along road to determine overtopping elevation. At a minimum, points must be at least every 50 feet, not to exceed 200 feet from bridge end bent stations. Changes in grade may dictate additional points.

Golf Cart Bridge Details. One face of bridge only (most restrictive face). Bridge elevation sketch is required. Stream centerline every 100 feet for 1000 feet upstream and downstream of bridges. (Centerline of the stream only)

Photo document site.

The Shaw-AIM Team shall perform right-of-way survey based on existing right-of-way information. Boundary survey shall extend 500 feet both ways from centerline of existing



road. The Shaw-AIM Team shall survey all geotechnical soil borings. Perform line cutting as necessary. Line survey will be required in the wooded areas.

The Shaw-AIM Team will research tax maps, property owner's names and addresses, deeds and plats for all affected properties and right-of-way information, research available Georgia State Plane Coordinate Monuments for horizontal and vertical control, and research available as-built drawings. The Shaw-AIM Team's professional land surveyor shall conduct field reviews. The Shaw-AIM Team shall attend technical meetings as necessary. The Shaw-AIM Team shall perform a QA/QC of its deliverables. The Shaw-AIM Team shall supervise its field and office personnel. The Shaw-AIM Team shall conduct coordination necessary to enable it to perform the above services.

The Shaw-AIM Team will send out letters (provided by the City) to all property owners before entering their property.

A copy of the completed survey will be submitted to the city.

#### **A-01-17000 Concept Report**

Based on the results of the concept meeting, the Shaw-AIM Team will draft the Concept Report and drawings provided. The Final concept report will be submitted for approval from the City.

The Shaw-AIM Team will provide 8 Roll Plots and 1 copy of the Concept Report to the City.

#### **A-01-19000 Concept - Prepare Design Variance/Exceptions**

Any/All Design Variances and Exceptions will be presented to the City for approval if required.

#### **A-01-21000 Concept - Public Information Outreach**

The City views public involvement as an integral part of the project development process. The involvement of local government officials, stakeholders, and the general public should be sought throughout the plan development process. Efforts to reach the public and be responsive to their concerns are an important element of project development and will be made on all projects. A very important element of the City's outreach efforts includes the timely and accurate responses to telephone, mail, and electronic mail contacts to the City. During concept development and at the beginning of the environmental process, the project team will evaluate the extent of public outreach efforts needed. The project team will identify concerned groups and affected communities and their leaders by reviewing the project area and by soliciting input from various City offices. Based on the outcome of the identification process, an outreach program will be developed and a schedule of public information open houses, public hearing open houses, project newsletters, or other outreach efforts will be proposed. There are various group meetings the Department may utilize to inform the public of proposed projects in their area.

Concept Coordination Meetings with the Quality of Life Office (QLO) to develop and review plans and documentation for public coordination required for project to proceed. Neighborhood Planning Unit (NPU)/other Stakeholders Information Plan Identification of internal and external stakeholders including Council and Commission, NPUs and business impacted for developing the public information plan. The plan is vital to obtaining appropriate public input to the project and mitigating risk of disrupting project budget and timetable. The plan will support facilitation of public meetings in order to share project information and receive input from impacted residents. Assist the QLO in developing a proactive communication campaign include a project fact sheet, a briefing document, meeting notices and follow-up to questions of the public meetings. Printing and distribution of the documents is not included in this scope of work.

#### **A-01-22000 Concept - Geotechnical Evaluation**

1. Obtain and review existing structure and boring data, if available.
2. Conduct a site reconnaissance to inspect the existing structure to note signs of structure settlement, observe the stream crossing and evaluate potential problems with erosion and scour, and observe and log the type of rock identified in rock outcrops at the structure location for correlation with data obtained from the test borings. Photographs will be taken to document the characteristics of the stream and bank for a distance of approximately 300 ft. upstream and downstream of the structure. The BFI Reconnaissance Form will be completed during the site reconnaissance.
3. Develop a boring and laboratory testing program that will include soil and rock drilling and sampling. The boring program will consider site access, utility locations, traffic patterns and the proposed new bridge structure. The boring program will include one test boring drilled in one of the traffic lanes behind each end bent, at the location of the proposed new end bent, and one test boring as close as practical to the location of each of the two proposed intermediate bents. No borings are included to locate the depth and extent of the existing end/intermediate bent spread footing because it is assumed that this data can be obtained from the design/as-built drawings for the existing structure. Further, survey test boring locations and elevations as well as the stream crossing profile and cross-section is not included and assumed to be provided by others. The test borings drilled at the end bents are expected to encounter bedrock near the anticipated foundation level based on preliminary field reconnaissance. These test borings will be drilled to below the anticipated foundation level and then into bedrock that will be cored (NX core) for 10 ft. (and until the percent recovery is at least 75%). Similarly, test borings drilled at the intermediate bents are expected to encounter bedrock near the anticipated foundation level. The test borings drilled at the locations of the proposed intermediate bents will also be drilled 10 ft. into bedrock below foundation level (and until the percent recovery is at least 75%). Rock will be stored in core boxes and appropriately labeled.  
The soil zone will be sampled and Standard Penetration Tests (SPT) performed beginning at a depth of 5 ft. below the existing ground surface and then at 5 ft.

intervals to refusal (the top of bedrock). Soil samples will be retained in clean sample jars that will be appropriately labeled.

Groundwater level measurements will be obtained during drilling. One of the test borings drilled at the end bents will have groundwater level measurements taken 24 hours after completion of the boring if the boring side walls have not collapsed.

The laboratory testing program is limited to a few selected soil samples, since it is anticipated that the structure foundations will be placed on bedrock. The laboratory data includes soil moisture content, plasticity and grain size analysis for the purpose of providing basic soil descriptions in accordance with the Unified Soil Classification System. Selected core pieces will be tested in the laboratory to measure the unconfined compressive strength of the intact rock sample. This data will be used to assign maximum allowable design foundation bearing values.

4. The bridge foundation investigation (BFI) will be performed in accordance with the general procedures established by the GDOT, Geotechnical Engineering Bureau. The purpose of performing the BFI is to obtain subsurface data on which to develop recommendations for the structure foundation, including the type of foundation, foundation bottom elevation and maximum design foundation bearing values. Additionally, since this bridge is for a stream crossing, scour and erosion protection must also be addressed in the BFI. The data will be presented in a format for ***FB Pier design***.

The proposal for the above-referenced project will include 40 ft. of SPT drilling, 40 ft. of rock coring (in 4 test borings), difficult maneuvering, restoration of site and engineering analysis, and report preparation, including recommendations. If auger refusal is reached at 17 ft. below land surface, 17 ft. of auguring and 3 SPT tests will be paid.

Tasks includes the following:

#### **FIELD WORK**

- Mobe/Demobe
- Hollow stem auger drilling
- SPT testing
- Traffic control
- Difficult Maneuvering

- Bedrock coring
- Restoring golf course landscape

### **LABORATORY TESTING**

- Natural Moisture Content (ASTM D-2216)
- Liquid and Plastic Limits (ASTM D-4318)
- Grain Size & Hydrometer Analysis (ASTM D-422)
- Unconfined Compression Test (ASTM D-2216)

### **ENGINEERING**

- Analysis and Report Preparation

The Shaw-AIM team will also conduct the Soil Survey in this phase.

#### **A-01-23000 Develop Alternatives**

The Shaw-AIM Team will develop alternatives with suggestions from the City. These will be provided to the City in the Concept Report.

#### **A-01-24000-Design Coordination**

The Shaw-AIM staff will manage and coordinate the efforts of our design team.

### **B-02-00000-Preliminary Plans**

Preliminary design begins with the approval of the project's Concept Report and many activities are automatically set into motion in accordance with the project's schedule.

#### **B-02-10000- Preliminary Plans-Environmental Documentation**

Upon approval of the project Concept Report, and in keeping with the project schedule, the Team will continue their process for gathering information and studying the impacts to the resources along the proposed project alignment. The Project Manager will provide the City with any supporting information needed to evaluate the environmental impacts.

For those projects involving Federal funds, the process outlined in the Georgia Environmental Policy Act (GEPA) must be followed. There are three levels of environmental documentation that are included in the environmental process outlined in the detailed scope.

Environmental documentation data will be provided to the city at their request.

#### **B-02-11000- Preliminary Plans-Public Information Outreach**

Informal meetings may be held at anytime with local public officials, neighborhood groups, civic associations, business associations, etc. at their request. The purpose of the informal Public Information Open House is to inform the public of a project that is proposed in their area, update the public on the status of a project, and to receive comments from the public about the proposed project. These open houses should be held at the earliest stage of project development or at such times as the Project Manager may deem necessary to solicit information or inform the public of the project status.

#### **Preliminary Plans**

Prepare and facilitate three (3) public meetings: To include: 2 NPU (A&B) and the Chastain Civic Park Organization. The intent of the three meetings is for notification of the project and to communicate the preliminary findings. Obtaining the venue, security and court reporting is not included in this scope of work.

Three (3) follow-up coordination meetings with QLO: To provide feedback, to report valuable insights regarding requirements and concerns, and to create the follow-up fact sheets for each of the three (3) meetings

#### **B-02-12000- Preliminary Plans-Roadway Design**

As soon as the horizontal and vertical geometry have been established and initial cross sections are available, the preliminary plans, along with pertinent surveys and reports will be sent to the Bridge Designer for their use in preparing preliminary bridge layouts. Plans sent to the bridge designer will include project cover sheet, typical sections, plan and profile sheets with all roadway geometry, including superelevation, and intersect stations and angles shown, and cross section sheets in the vicinity of the bridge site. During preliminary plan development, the need for retaining walls shall be determined. The Shaw-AIM team will provide for preliminary roadway plans, the project cover sheet, typical sections, roadway plan and profile sheets indicating wall locations, wall plan and profile (wall envelope) and drainage plans, erosion control plans, a soils report from the Geotechnical, existing utilities plans, and other items as required. The Shaw-AIM Team will work with the Project's schedule to identify any right-of-way implications. The Shaw-AIM Team will provide 20 bluelines for utilities review, environmental review and roadway review.

#### **B-02-13000- Preliminary Plans-Bridge Design**

When preliminary alignments are set, the Project Manager will send to the bridge designer a partial set of preliminary construction plans to begin preliminary bridge layouts and wall designs. At a minimum, the partial set of plans will contain the horizontal and vertical geometry, roadway typical sections, environmental concerns, and any known constraints at the proposed bridge site. If at any time these design elements

change, it is the Project Manager's responsibility to inform the bridge designer of such changes.

As a first step in preliminary bridge design, the bridge designer will confirm the Concept Report recommendations about each bridge site to determine the appropriate type of design (e.g., widening, replacement, new, etc). Priority attention will be given to providing preliminary roadway plans to the bridge designer as soon as possible. The Shaw-AIM team will provide 24 sets of blueprints for City review.

#### **B-02-14000- Preliminary Plans-Bridge Hydraulics Design**

A completed hydraulic engineering field report is required for each site with a hard copy of all applicable survey data. The required survey data is specified in this field report. All survey data should be referenced in project stations and offsets. Information and survey data in the field report are necessary for bridge replacements. Hydraulic studies will be done utilizing the WSPRO or HECRAS program unless a Federal Emergency Management Agency (FEMA) regulated stream is involved. FEMA requires the use of the HEC2 program. Therefore, hydraulic studies involving FEMA-regulated streams will be done utilizing both WSPRO or HECRAS and HEC2. All stream involvements, temporary and permanent, will be coordinated with the Office of Environment/Location. Any impacts will be discussed in the appropriate environmental document and where required, mitigation implemented.

#### **B-02-15000- Preliminary Plans-Existing Hydraulic Model Completion**

The team will request the existing conditions hydraulic model created for the Flood Insurance Study dated June 22, 1998 for Nancy Creek from FEMA or another appropriate entity. This model will be truncated to focus on the study area. This model, referred to as the effective model, will be used to determine if construction causes any raises in the flood elevation. If the effective hydraulic model is a HEC-2 model, the team will update the model to HEC-RAS for the study reach. The team will provide a survey request with detailed survey information required to complete the existing conditions model. The additional cross-sections and more detailed bridge information will be incorporated into the existing conditions model. This model will be referred to as the existing conditions model.

#### **B-02-16000- Preliminary Plans-Proposed Hydraulic Model Completion**

The Shaw-AIM Team will modify the existing conditions HEC-RAS model to simulate the new bridge opening. The Shaw-AIM Team will work with the Washington Group in the hydraulic design of the new structure. This proposed conditions model will be compared against the effective model for changes in base flood elevations. Attempts will be made to design the bridge where no increases in the base flood elevation will be encountered. This scope of services is limited to 3 design iterations.

#### **B-02-17000- Preliminary Plans-Scour Evaluation**

Scour will be predicted for piers and abutments for the structure. An estimation of live-bed contraction scour will be performed as well. For predictions of excessive scour, countermeasures will be sized and recommended. The team will utilize the equations presented in HEC-18 for this task.

**B-02-18000- Preliminary Plans-Final Geotech Report(includes BFI)**

Submit the Geotech Field Report to the Design Team and the City.

**B-02-19000- Preliminary Plans-Utility Coordination**

The request for utility relocation plans, first submission for utility plans, must go to the respective utility owners. The Shaw-AIM Team will send updated base plan sheets or electronic files to the specific utility company. This updated information will contain the plotted existing utility information, preliminary drainage (including longitudinal drainage) and erosion control plans, stage construction plans, bridge and wall locations with foundations, preliminary right-of-way and easement lines, and construction limits.

Copies of requests for information will be provided to the city.

**B-02-20000- Quantities and Detailed Estimate**

The Shaw-AIM Team will provide preliminary quintiles and a detailed Estimate. A copy will be provided to the city for review.

**B-02-21000- Preliminary Plans-Preliminary Special Provisions**

Special Provisions will be required on any project where proposed work is not covered under the current specifications, or is being modified. Include in the Special Provision the description of work, materials, construction, measurement and payment. In general, use the same format as that used for the Standard Specifications. Special Provision may be required for this design for any City requirements different from the GDOT standards, details and specifications.

**B-02-22000- Preliminary Plans-QA/QC**

The plans will have QA/QC reviews during the Preliminary Design phase. The QA/QC data will be submitted back to the original designer to be incorporated into the final design documents.

**B-02-22100- Preliminary Plans-Independent Technical Review**

An Independent Technical review will be conducted during the Preliminary Design phase. The Independent Technical Review data will be submitted back to the original designer to be incorporated into the final design documents. The Plans will have independent reviews during the Preliminary Design phase

**B-02-23000- Preliminary Plans-Preliminary Field Plan Review**

The Shaw-AIM Team will request a Preliminary Field Plan Review (PFPR) for this project. The City will coordinate with the Project Manager to determine the need for a PFPR on this Project. If it is determined that a PFPR is required, we will follow the requirements outlined below.

The Preliminary Field Plan Review should not be requested until the required public hearings have been held and the environmental document has been approved for the project. A letter from the Environmentalist will be included in the PFPR request package stating that these conditions have been met.

A site meeting to conduct the preliminary field plan review will be scheduled at the City's request.

#### **B-02-24000- Preliminary Plans-Design Coordination**

The Shaw-AIM staff will manage and coordinate the efforts of our design team.

#### **C-03-00000-ROW Plans**

##### **C-03-11000-Prepare ROW Plans**

When the right-of-way plans are finished, they will be submitted to the City for review and approval. During the review process, an updated estimate of the right-of-way cost will be prepared and the need for contract appraisers and consultants for right-of-way acquisition will be determined. Right-of-Way plans will not be approved until the environmental document is approved.

##### **C-03-12000-QA/QC ROW Plans**

The QA/QC will be performed by the GDOT PPG and PDP 2000, along with any City guidelines. The Right of Way Quality Control will be included in the overall QA/QC Plan.

The QA/QC/Independent Technical Review data will be submitted back to the original designer to be incorporated into the final design documents.

##### **C-03-13000-ROW Field Plan Review**

If required by the City, the Shaw-AIM Team will hold a ROW Field Plan Review. This will be coordinated with the City.

##### **C-03-14000-ROW Plans Revisions**

After the City reviews the submitted ROW plans, and revisions are necessary, the Shaw-AIM Team will submit 6 mylars, 3 bluelines, 2 half-size Final ROW plans to the City.

##### **C-03-15000-ROW Acquisition/Easement**



If acquisition is required, the City will request right-of-way funds authorization when the right-of-way plans are approved. Appraisal contracts will be prepared with particular attention given to those parcels involving relocations and any railroad parcels. Review of appraisals involving relocations and demolition contracts will also be given priority. Once right-of-way plans are approved, a property owners' meeting will be held in accordance with the City's rules and regulations. As outlined in the City's Right-of-Way Manual, right-of-way acquisition procedures will follow Federal guidelines for acquisition regardless of where the funds come from for acquisition.

Easements during construction will be required. Easement documentation will be provided to the City.

### **D-04-00000-Final Plans**

#### **D-04-10000-Final Plans-Environmental Documentation**

The Environmentalist will certify to the Shaw-AIM Team and the City, by letter at least six (6) weeks prior to the letting, that the environmental approvals are current and required permits are in hand. The original letter of certification will be sent to the City. The Environmentalist will verify that necessary approvals are current and required permits are in hand. The Environmentalist will provide the City and the Shaw-AIM Team with a copy of a letter of certification.

#### **D-04-11000- Final Plans-Public Information Outreach**

During the Final Design stage, the last of three meetings would be held at this time. Meeting minutes will be provided to the City.

### **Final Plans**

Public Communications: Develop a public notification flyer "leave behinds" for the project. This file is the working document, which will be used in the construction phase.

#### **D-04-12000- Final Plans-Roadway Design**

During this stage the Final Design will be executed. The final design stage of project development begins with the approval of the environmental document and the distribution of the Preliminary Field Plan Review Report.

The Shaw-AIM Team will provide final horizontal and vertical roadway layout plans, cover, general notes, index, final typical sections, final quantities and detail estimate, final driveway profile plans, final utility plans, final erosion control plans, final maintenance of traffic plans, final signing and marking plans, and final wall plans (if required). Copies of all design calculations will be provided as needed.

#### **D-04-13000- Final Plans-Bridge Design**

The final Bridge Design will have complete construction plans. The substructure supporting the bridge will consist of reinforced concrete piers utilizing square columns with rectangular pier caps. The pier footings will be covered with two feet of fill and supported either on steel H-piles or drilled shafts. Sizes of the columns will be consistent between piers and kept to the minimum size as required by design.

The superstructure will utilize either AASHTO PCI beams or reinforced concrete T - girders and be constructed cast in-place or cast at the prestressing plant and installed with a crane. The superstructure will be broken into units consisting of two or three spans in the typical continuous slab layout with no expansion joints provided between spans except at the bridge end bent approach slabs.

The layout of the vertical profile and design of the superstructure allows for several different construction methods for the precast members. The contractor will determine the final construction method based on the best economical choice.

In addition to the bridge structure, any miscellaneous conduits or utilities that are required will be part of the plans. Other than the concrete barrier rails, all items supported on the bridge may not be visible, except from the ground below the bridge.

Typical sections of the bridge depicting superstructure types have been provided in the proposal. Elevations and plans of the substructure have also been provided in the proposal. The proposed dimensions, construction centerlines and profile grade lines have been identified in the proposal drawings.

There are two typical sections of the superstructure. One section is a concrete T - girder supporting the required lanes (40' wide) and the other is a AASHTO PCI girder for the main span. Both girders will keep a consistent depth.

The substructure of the bridge will consist of reinforced concrete piers supported on reinforced concrete footings or alternate design depending on field conditions and geotechnical data. The typical pier will have a consistent look by utilizing two or three columns bent with a rectangular shaped pier cap.

The footings will either utilize steel H-piles, spread footing, or drilled shafts, depending on the geotechnical report.

The typical pier will be constructed by performing any required excavating using a backhoe or equivalent equipment. Piles can then be driven using a crane supporting a pile hammer. After this, the footing can be formed and poured. Once the footing concrete has cured, the forms for the column can be placed and the column will be poured. Finally, the cap forms can be placed and the cap can be poured.

Deliverables to the City for Bridge Plans:

Bridge Plans will include but not be limited to:

**PLAN VIEW**

- Beginning and End Stations
- Centerline bents and BFPRs with skews
- Width gutter to gutter, out to out, barriers (1'-7½" no "BARRIER") , sidewalks
- North arrow with correct direction
- Stage const. widths, joints
- Scale (if different)
- Bridge Destinations
- PGL and centerlines
- Bearing
- P.C. and P.T. with stations
- Utility CLs and offsets
- Limits of existing bridge with bents

### **ELEVATION VIEW**

- Span lengths
- Bent numbers under bent
- Stations and Elevations at each bent
- Elevation tick marks up both sides
- Original ground line
- End roll slope normal to bent
- Cut substructure off at ground line
- If pile bents, piles shown narrower than cap width  
Flow direction (ebb and tide as appropriate)
- Riprap limits (20' from end of wingwall)  
50, 100, and 500 year flood levels (or flood of record)
- 500 year scour line (parallel to channel bottom if no bents in water)

### **NOTES**

- Traffic data (agree w/ cover?)
- Horizontal Curve Data
- Vertical curve data (agree w/ roadway?)
- Benchmark w/ description, station, offset, elevation, coordinates
- Lt. and rt. berm elevations
- Construction sequence
- Min. bottom of beam
- Proposed bottom of beam
- Bridge consists of
- Design data with current specifications
- Utilities
- Check PI No.
- Bridge Serial & ID Nos.
- Check title block
- Scale (10, typ. or 20 scale)

- Rip Rap detail
- Drainage Info, flood info agree w/ hydro study?
- Scour depths agree? sum?
- P.E. Stamp

#### **D-04-14000- Final Plans- Bridge Hydraulics Design**

##### **Scour Prediction**

Scour will be predicted for piers and abutments for the structure. An estimation of live-bed contraction scour will be performed as well. For predictions of excessive scour, countermeasures will be sized and recommended. Bridge Hydrologist will utilize the equations presented in HEC-18 for this task. These countermeasures will be placed on the bridge plans.

#### **D-04-15000- Final Plans-Hydraulic Study Completion**

##### **Hydraulic Engineering Field Report**

Bridge Hydrologist will compile the results of the modeling effort into a hydraulic report. The report will also provide recommendations regarding the need for a submittal to FEMA. If a no-rise is unattainable for this project, a Conditional Letter of Map Revision (CLOMR) will need to be submitted. Required information for plan/profile sheets with regard to drainage will be presented. This information includes drainage area, design frequency and discharge, BFE, and scour information

The completed full hydraulic report will be submitted along with the completed bridge plans.

#### **D-04-16000- Final Plans-Utility Coordination**

##### **Utility Relocation Plans**

All requests for utility relocation plans must go to the respective utility owners through the City. Second submittal utility plans (6 sets each company) to each utility. The Shaw-AIM Team will send updated plans or electronic files to the specific utility company. These plans will contain cover, typical, plan sheets, drainage plans, preliminary bridge plans, staging plans, and ROW plans.

##### **Utility Agreements**

The Project Manager should check with the City Office of Utilities early in the final design stage to ascertain the required information needed to furnish the utility owner in order that utility agreements can be negotiated.

#### **D-04-17000- Final Plans-Quantities and Detailed Estimate**

The Summary of Quantities tabulates individual summaries of all items to construct the project. The quantities may be itemized according to the roadway and bridge plan sheets where each item is shown.

The arrangement of the quantity boxes on the Summary of Quantities sheets is dependent on the number used and the size each one must be to contain all of the necessary information. Aesthetics should be considered. Show standard notes or applicable designations under the appropriate box.

The Summary of Drainage Quantities sheet shows the location, size, length, number, and type of drainage structures. This includes quantities associated with culverts, pipe, inlets, outlets and riprap.

The Detailed Estimate generally follows the Summary of Quantities sheets in the plan set. The Detailed Estimate is a synopsis of pay quantities from the Summary of Quantities sheets and includes bid pay item numbers, units, and total quantity for each pay item. Generally, all items on the Summary of Quantities sheets shall be on the Detailed Estimate unless otherwise noted. The Summary of Drainage Quantities sheet and Detailed Estimate should reflect the City's format.

A meeting with the City will be scheduled to review the Quantities and Detail Estimate.

#### **D-04-18000-Final Plans-Special Provisions**

The Final Special Provision is a modification to the current "Standard (or applicable supplemental) Specifications for Construction of Roads and Bridges." A Special Provision will be required on any project where proposed work is not covered under the current specifications, or is being modified. Include in the Special Provision the description of work, materials, construction, measurement and payment. In general, use the same format as that used for the Standard Specifications. Special Provision may be required for this bridge design for any City requirements different from the GDOT Standards, Details, and Specifications.

#### **D-04-19000- Final Plans-QA/QC Plan Review**

The final QA/QC review will be done in house.

The QA/QC data will be submitted back to the original designer to be incorporated into the final design documents.

#### **D-04-19100- Final Plans-Independent Technical Review**

An Independent Review will be executed by others within the Team from the GDOT PPG and PDP 2000, along with any City guidelines.

The Independent Technical Review data will be submitted back to the original designer to be incorporated into the final design documents.

#### **D-04-20000-Final Plans-Field Plan Review**

The FFPR should not be requested until the final construction plans, including checked quantities, and special provisions are complete. The FFPR should not be held later than 16 weeks prior to the project's scheduled let date; therefore, the Project Manager should request the FFPR no later than 20 weeks before the scheduled let date. It is desirable that the FFPR be held more than 16 weeks before the scheduled let date. The Shaw-AIM Team will submit a letter of request for a FFPR to the City. A complete set of construction plans and special provisions will accompany the letter of request to the City. In addition, there will be a letter in the package stating the conditions in the environmental document and that the conditions of any environmental permits have been adequately addressed by the plans and specifications and an environmental reevaluation has been performed, if required.

The City will determine the scope of the FFPR (e.g., full office and field review, office review only, email conference only, no Final Field Plan Review required, or any combination thereof) and schedule, coordinate, and conduct the appropriate review. The City will only schedule the FFPR when a complete FFPR request is received. Failure to provide adequate plans and all of the required information with the request will delay the scheduling of the inspection. The City shall respond to the FFPR request within five (5) working days after receiving the request, either scheduling the event, or if the FFPR request is incomplete, requesting the additional required information. In their Field Plan Review scheduling letter, the City will identify the Final Field Plan Review Team and the participating offices and request the other City departments to only stake bridge endrolls if they are different from those reviewed at the Preliminary Field Plan Review (PFPR). The Shaw-Aim's Team will submit 14 blueines, 2 half size plans to the City for FFPR.

#### **D-04-21000- Final Plans-Construction Estimate**

When all Final Field Plan Review (FFPR) plans and special provision's comments have been addressed and resolved and the project cover sheet signed by the City, the Project Manager will submit, at least nine (9) weeks prior to the proposed letting, half sized final construction plans, special provisions, soil reports, BFI's, electronic earthwork files, and the designer's cost estimate to the City for final review and the preparation of the Construction Cost Estimate. At the same time, the Project Manager will also submit to the City the final construction plans, special provisions, electronic earthwork files, soil reports, BFI's, required information for the Notice of Intent (NOI), the Designer's Checklist, and the Construction Estimate. A copy of the Construction Cost Estimate is also sent at this time to the Office of Procurement. The Construction Cost

Estimate will not be based on Item Mean Summary prices but will be prepared by the Project Manager utilizing professional judgment. This estimate is utilized by the City for requesting authorization to let the project and must be as accurate as possible.

#### **D-04-22000- Final Plans-Construction Schedule**

The Construction Schedule will be generated at the time of PS&E. A copy of the construction schedule will be submitted to the city for review and approval.

#### **D-04-23000- Final Plans-Construction Documents**

The Shaw-AIM Team will be responsible for submitting the Plans, Specifications & Estimate (PS&E) package to the City for project authorization. The PS&E package will consist of the following information but not limited to:

- Work Authorization Request - Furnished by the City Office of Financial Management,
- Two Final set of signed Mylar plans (approved by the City) - Furnished by the appropriate Shaw-Aim's Team.
- Bid proposal which includes special provisions, contract provisions, and bid items – Furnished by the City,
- Right-of-Way Certification - Furnished by the City,
- Construction Cost Estimate prepared by the Project Manager and based upon bid items in the bid proposal - Furnished by Project Manager,
- A statement indicating all necessary permits that are needed have been obtained or the status thereof.
- Approved agreements with utilities, and municipalities, or status thereof – Furnished by the Office of Utilities and/or the Office of Financial Management, and Environmental Certification

#### **D-04-24000- Final Plans-Design Coordination—**

The Shaw-AIM staff will manage and coordinate the efforts of our design team.

#### **D-04-25000- Final Plans-Bridge Shop Drawings Review**

The Shaw-AIM Team and staff will check contractor submitted shop drawings and return back to the vendor for corrections or modifications. They will be stamped approved, rejected or approved as noted.

#### **E-05-00000-Construction Services**

##### **E-05-10000-Construction Services - Bid Evaluation**

The Shaw-AIM Team and staff will evaluate the bids taken by the city for the bridge replacement and make recommendations to the City for the Lowest and Best Bid. The Report of Findings will be submitted to the City.

##### **E-05-11000-Construction Services**

The Shaw-AIM team scope of work during the construction phase shall consist of shop drawing review and approval, responding to construction questions related to our design documents, developing design modification to our drawings, as required due to unforeseen field changes, attend bi-weekly construction meetings and perform site visit to observe and assist in problem-solving situations that arise during the course of construction. These site visits shall be requested by the City of Atlanta on-site representative. Technical writing and review for the "Ground breaking" media kits and public notification flyers, "leave behinds". The JV team will provide updates and assist the QLO in processing project-related complaints and concerns. The Shaw-AIM team assumes a 4-month construction period for this project. Printing and distribution of public notification flyer "leave behinds" are not included in the scope of work.



## **F-06-00000-Meetings/Coordination/Controls**

### **F-06-10000-Project Coordination.**

The Shaw-AIM Team will coordinate and administer all aspects of the project to final completion, including management/use of Primavera Expedition. The project schedule will be updated as required. The budget will be updated. The design will be modified to fall within budget units as necessary.

### **F-06-11000-Document Controls**

All project documentation to include, but not be limited to, meeting minutes, correspondence, reports, and contract-required reports will be prepared and entered into Primavera Expedition.

### **F-06-12000-EBO Report**

MBE/FBE business participation goals will be verified, met, and reported.

### **F-06-13000-Procurement**

Contracts/work orders with all subconsultants will be procured and administered. Insurance required from subconsultants will be verified, met, and reported.

Title  
Subject  
Author  
Manager

**DETAIL REPORT NO.1A**  
Reported From: 000000 Powers Ferry Rd Bridge Rel  
Report Total: \$374,720

LEVEL	QTY	Hrs	Crew/ProdFact	LABOR	MATERIAL	EQUIPMENT	OTHERS	TOTAL
<b>A-01-10000 Concept -Kick-off Meeting w/City</b>								
00013H Engineer 8 (Prog. Mngr.)	2			1 00013H 2 1,000	174.74 \$349	\$0	\$0	174.74 \$349
00013H Engineer 8								
00012H Engineer 7	4			1 00013H 4 1,000	174.74 \$699	\$0	\$0	174.74 \$699
00009H Engineer 4	4			1 00012H 4 1,000	150.14 \$601	\$0	\$0	150.14 \$601
00010H Engineer 5	4			1 00009H 4 1,000	83.46 \$334	\$0	\$0	83.46 \$334
00017H Designer 4	10			1 00010H 10 1,000	100.13 \$1,001	\$0	\$0	100.13 \$1,001
00011H Engineer 6	1			1 00017H 1 1,000	92.22 \$92	\$0	\$0	92.22 \$92
00031H Scheduler	4			1 00011H 4 1,000	123.11 \$492	\$0	\$0	123.11 \$492
00012H Engineer 7	4			1 00031H 4 1,000	103.84 \$415	\$0	\$0	103.84 \$415
00017H Designer 4	4			1 00012H 4 1,000	150.14 \$601	\$0	\$0	150.14 \$601
	2			1 00017H 2 1,000	92.22 \$184	\$0	\$0	92.22 \$184
<b>TOTAL A-01-10000 Concept -Kick-off Meeting w/City</b>								
		39			\$4,769	\$0	\$0	\$4,769

Company

04/27/2005

Title  
Subject  
Author  
Manager

**DETAIL REPORT NO.1A**  
Reported From: 000000 Powers Ferry Rd Bridge Rel  
Report Total: \$374,720

LEVEL	QTY	Hrs	Crew/ProdFact	LABOR	MATERIAL	EQUIPMENT	OTHERS	TOTAL
<b>A-01-11000 Concept - Prepare QA/QC/Independent Plan</b>								
00013H Engineer 8	1	1	1	00013H 174.74 \$175	Estimate Tree Structure Rollups 000000 Powers Ferry Rd Bridge Replacement A-01-00000 Concept Tree Depth= 3			\$374,720 \$89,963
TOTAL A-01-11000 Concept - Prepare QA/QC/Independent Plan								
		1		\$175	\$0	\$0	\$0	\$175

<b>A-01-12000 Concept - Prepare Project Management Plan</b>								
00013H Engineer 8	2	2	2	00013H 174.74 \$349	Estimate Tree Structure Rollups 000000 Powers Ferry Rd Bridge Replacement A-01-00000 Concept Tree Depth= 3			\$374,720 \$89,963
TOTAL A-01-12000 Concept - Prepare Project Management Plan								
		2		\$349	\$0	\$0	\$0	\$349

<b>A-01-13000 Concept - Prepare Design Data Notebook</b>								
00012H Engineer 7	2	2	2	00012H 150.14 \$300	Estimate Tree Structure Rollups 000000 Powers Ferry Rd Bridge Replacement A-01-00000 Concept Tree Depth= 3			\$374,720 \$89,963
00010H Engineer 5	15	15	15	00010H 100.13 \$1,502		\$0	\$0	150.14 \$300
TOTAL A-01-13000 Concept - Prepare Design Data Notebook								
		17		\$1,802	\$0	\$0	\$0	\$1,802

Company

04/27/2005

Title  
Subject  
Author  
Manager

DETAIL REPORT NO.1A  
Reported From: 000000 Powers Ferry Rd Bridge Rel  
Report Total: \$374,720

LEVEL	QTY	Hrs	Crew/ProdFact	LABOR	MATERIAL	EQUIPMENT	OTHERS	TOTAL
<b>A-01-14000 Concept - Prelim. Site Investigation</b>								
00011H Engineer 6	U.C. per mnhr →	4						
		1	00011H	123.11	Tree Depth= 3			
		4	1.000	\$492		\$0	\$0	\$0
								\$123.11
								\$492
<b>TOTAL A-01-14000 Concept - Prelim. Site Investigation</b>								
		4		\$492	\$0	\$0	\$0	\$492

Estimate Tree Structure Rollups  
000000 Powers Ferry Rd Bridge Relplacement  
A-01-00000 Concept

\$374,720  
\$89,963

### A-01-15000 Concept - Data Base Prep (Survey)

00010H Engineer 5	U.C. per mnhr →	10						
		1	00010H	100.13	Tree Depth= 3			
		10	1.000	\$1,001		\$0	\$0	\$0
								\$100.13
00025H 3 Man Crew	U.C. per mnhr →	85						
		1	00025H	159.02				
		85	1.000	\$13,517		\$0	\$0	\$0
								\$159.02
00023H Land Survey	U.C. per mnhr →	60						
		1	00023H	97.96				
		60	1.000	\$5,878		\$0	\$0	\$0
								\$97.96
00018H CAD Draftsman 3	U.C. per mnhr →	140						
		1	00018H	65.33				
		140	1.000	\$9,146		\$0	\$0	\$0
								\$65.33
								\$9,146
<b>TOTAL A-01-15000 Concept - Data Base Prep (Survey)</b>								
		295		\$29,542	\$0	\$0	\$0	\$29,542

Estimate Tree Structure Rollups  
000000 Powers Ferry Rd Bridge Relplacement  
A-01-00000 Concept

\$374,720  
\$89,963

### A-01-17000 Concept Report

00012H Engineer 7	U.C. per mnhr →	8						
		1	00012H	150.14	Tree Depth= 3			
		8	1.000	\$1,201		\$0	\$0	\$0
								\$150.14
								\$1,201

Estimate Tree Structure Rollups  
000000 Powers Ferry Rd Bridge Relplacement  
A-01-00000 Concept

\$374,720  
\$89,963

Company

04/27/2005

Success Estimating and Cost Management System

Title  
Subject  
Author  
Manager

LEVEL

# DETAIL REPORT NO.1A Reported From: 000000 Powers Ferry Rd Bridge Rel Report Total: \$374,720

## A-01-17000 Concept Report

		QTY	Hrs	Crew/ProdFact	LABOR	MATERIAL	EQUIPMENT	OTHERS	TOTAL
00010H Engineer 5		Subcontractor: Eng-Wsh							
		U.C. per mnhr ->	45	1	00010H	100.13			
				45	1,000	\$4,506			\$374,720
00009H Engineer 4		Subcontractor: Eng-Wsh							
		U.C. per mnhr ->	24	1	00009H	83.46			
				24	1,000	\$2,003			\$89,963
00013H Engineer 8		Subcontractor: Eng-Wsh							
		U.C. per mnhr ->	9	1	00013H	174.74			
				9	1,000	\$1,573			\$374,720
TOTAL A-01-17000 Concept Report				86		\$9,283	\$0	\$0	\$9,283

## A-01-19000 Concept - Prepare Design Var. \Exceptions

00012H Engineer 7		Subcontractor: Eng-Wsh							
		U.C. per mnhr ->	1	1	00012H	150.14			
				1	1,000	\$150			\$374,720
00010H Engineer 5		Subcontractor: Eng-Wsh							
		U.C. per mnhr ->	4	1	00010H	100.13			
				4	1,000	\$401			\$89,963
TOTAL A-01-19000 Concept - Prepare Design Var. \Exceptions				5		\$551	\$0	\$0	\$551

## A-01-21000 Concept - Public Outreach

00013H Engineer 8 (Prog. Mngr.)		Subcontractor: Eng-Shw							
		U.C. per mnhr ->	1	1	00013H	174.74			
				1	1,000	\$175			\$374,720
TOTAL A-01-21000 Concept - Public Outreach				2		\$349	\$0	\$0	\$349

Company

04/27/2005

**Title**  
**Subject**  
**Author**  
**Manager**

**DETAIL REPORT NO.1A**  
 Reported From: 000000 Powers Ferry Rd Bridge Rel  
 Report Total: \$374,720

**LEVEL**

	<u>QTY</u>	<u>Hrs</u>	<u>Crew/Prod/Fact</u>	<u>LABOR</u>	<u>MATERIAL</u>	<u>EQUIPMENT</u>	<u>OTHERS</u>	<u>TOTAL</u>
<b>A-01-21000 Concept - Public Outreach</b>								
00013H Engineer 8	U.C. per mnhr → 26	1	00013H	174.74	Tree Depth= 3			\$374,720
		26	1,000	\$4,543	000000 Powers Ferry Rd Bridge Replacement			\$89,963
					A-01-00000 Concept			
00011H Engineer 6	U.C. per mnhr → 84	1	00011H	123.11		\$0	\$0	174.74
		84	1,000	\$10,341				\$4,543
00013H Engineer 8	U.C. per mnhr → 4	1	00013H	174.74		\$0	\$0	123.11
		4	1,000	\$699				\$10,341
00027H Off. Manager	U.C. per mnhr → 4	1	00027H	55.96		\$0	\$0	174.74
		4	1,000	\$224				\$699
<b>TOTAL A-01-21000 Concept - Public Outreach</b>				<b>119</b>	<b>\$15,982</b>	<b>\$0</b>	<b>\$0</b>	<b>\$15,982</b>

<b>A-01-22000 Concept - Geotechnical Evaluation</b>								
00012H Engineer 7	U.C. per mnhr → 20	1	00012H	150.14	Tree Depth= 3			\$374,720
		20	1,000	\$3,003	000000 Powers Ferry Rd Bridge Replacement			\$89,963
					A-01-00000 Concept			
00012H Engineer 7	U.C. per mnhr → 7	1	00012H	150.14		\$0	\$0	150.14
		7	1,000	\$1,051				\$3,003
00011H Engineer 6	U.C. per mnhr → 50	1	00011H	123.11		\$0	\$0	150.14
		50	1,000	\$6,156				\$1,051
00009H Engineer 4	U.C. per mnhr → 40	1	00009H	83.46		\$0	\$0	123.11
		40	1,000	\$3,338				\$6,156
00018H CAD Draftsman 3	U.C. per mnhr → 8	1	00018H	65.33		\$0	\$0	83.46
		8	1,000	\$523				\$3,338
<b>TOTAL A-01-22000 Concept - Geotechnical Evaluation</b>				<b>119</b>	<b>\$15,982</b>	<b>\$0</b>	<b>\$0</b>	<b>\$15,982</b>

**Company**

04/27/2005

Title  
Subject  
Author  
Manager

LEVEL

# DETAIL REPORT NO.1A Reported From: 000000 Powers Ferry Rd Bridge Rel Report Total: \$374,720

## A-01-22000 Concept - Geotechnical Evaluation

	QTY	Hrs	Crew/ProdFact	LABOR	MATERIAL	EQUIPMENT	OTHERS	TOTAL
00027H Off. Manager	8	1	00027H	55.96	Tree Depth= 3			\$374,720
100000 Materials and Supplies		8	1.000	\$448				\$48,963
200000 Drilling	1	1	1.000	\$0	3000			3000
					\$3,000			\$3,000
	1	1	1.000	\$0	9500			9500
					\$9,500			\$9,500
<b>TOTAL A-01-22000 Concept - Geotechnical Evaluation</b>		<b>133</b>		<b>\$14,518</b>	<b>\$12,500</b>	<b>\$0</b>	<b>\$0</b>	<b>\$27,018</b>

## B-02-10000 Prelim. Plans -Env. Documentation

00006H Engineer 5	80	1	00006H	100.13	Tree Depth= 3			\$374,720
00012H Engineer 7		80	1.000	\$8,010				\$101,147
00018H CAD Draftsman 3	26	1	00012H	150.14				100.13
		26	1.000	\$3,904				\$8,010
00006H Engineer 5--Biologist	20	1	00018H	65.33				150.14
		20	1.000	\$1,307				\$3,904
00006H Engineer 5--Wetlands	27	1	00006H	100.13				65.33
		27	1.000	\$2,704				\$1,307
00006H Engineer 5--Historian	27	1	00006H	100.13				100.13
		27	1.000	\$2,704				\$2,704
	32	1	00006H	100.13				100.13
		32	1.000	\$3,204				\$2,704
								100.13
								\$3,204

Company

04/27/2005

Title  
Subject  
Author  
Manager

**DETAIL REPORT NO.1A**  
Reported From: 000000 Powers Ferry Rd Bridge Rel  
Report Total: \$374,720

LEVEL

	QTY	Hrs.	Crew/Prod/Fact	LABOR	MATERIAL	EQUIPMENT	OTHERS	TOTAL
<b>B-02-10000 Prelim. Plans -Env. Documentation</b>								
00006H Engineer 5-Archaeologist	24	1	00006H	100.13				\$374,720
		24	1.000	\$2,403	\$0	\$0	\$0	\$101,147
Subcontractor: Eng-Shw								
U.C. per mnhr ->								
Tree Depth= 3								
00013H Engineer 8		1	00013H	174.74				100.13
		1	1.000	\$175	\$0	\$0	\$0	\$2,403
Subcontractor: Eng-Wsh								
U.C. per mnhr ->								
TOTAL B-02-10000 Prelim. Plans -Env. Documentation								
		237		\$24,410	\$0	\$0	\$0	\$24,410

Estimate Tree Structure Rollups  
000000 Powers Ferry Rd Bridge Relplacement  
B-02-00000 Preliminary Plans

**B-02-11000 Prelim. Plans -Public Outreach**

00013H Engineer 8 (Prog. Mngr.)	8	1	00013H	174.74				\$374,720
		8	1.000	\$1,398	\$0	\$0	\$0	\$101,147
Subcontractor: Eng-Shw								
U.C. per mnhr ->								
Tree Depth= 3								
00013H Engineer 8		1	00013H	174.74				174.74
		20	1.000	\$3,495	\$0	\$0	\$0	\$1,398
Subcontractor: Eng-Wsh								
U.C. per mnhr ->								
00009H Engineer 4		1	00009H	83.46				174.74
		2	1.000	\$167	\$0	\$0	\$0	\$3,495
Subcontractor: Eng-Wsh								
U.C. per mnhr ->								
00010H Engineer 5		1	00010H	100.13				83.46
		13	1.000	\$1,302	\$0	\$0	\$0	\$167
Subcontractor: Eng-Wsh								
U.C. per mnhr ->								
00011H Engineer 6		1	00011H	123.11				100.13
		84	1.000	\$10,341	\$0	\$0	\$0	\$1,302
Subcontractor: Env-ERS								
U.C. per mnhr ->								
00027H Off. Manager		1	00027H	55.96				123.11
		12	1.000	\$672	\$0	\$0	\$0	\$10,341
Subcontractor: Env-ERS								
U.C. per mnhr ->								
TOTAL B-02-11000 Prelim. Plans -Public Outreach								
					\$0	\$0	\$0	55.96
								\$672

Company

04/27/2005



Title  
Subject  
Author  
Manager

**DETAIL REPORT NO.1A**  
Reported From: 000000 Powers Ferry Rd Bridge Rel  
Report Total: \$374,720

LEVEL

	QTY	Hrs	Crew/Prod/Fact	LABOR	MATERIAL	EQUIPMENT	OTHERS	TOTAL
<b>B-02-11000 Prelim. Plans -Public Outreach</b>								
00013H Engineer 8	U.C. per mnhr ->	7						
					Estimate Tree Structure Rollups 000000 Powers Ferry Rd Bridge Replacment B-02-00000 Preliminary Plans			\$374,720 \$101,147
					Tree Depth= 3			
		1	00013H	174.74				174.74
		7	1.000	\$1,223	\$0	\$0	\$0	\$1,223
<b>TOTAL B-02-11000 Prelim. Plans -Public Outreach</b>		<b>146</b>		<b>\$18,597</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$18,597</b>

Estimate Tree Structure Rollups  
000000 Powers Ferry Rd Bridge Replacment  
B-02-00000 Preliminary Plans

**B-02-12000 Prelim. Plans -Roadway Design**

00013H Engineer 8	U.C. per mnhr ->	9						
					Estimate Tree Structure Rollups 000000 Powers Ferry Rd Bridge Replacment B-02-00000 Preliminary Plans			\$374,720 \$101,147
					Tree Depth= 3			
		1	00013H	174.74				174.74
		9	1.000	\$1,573	\$0	\$0	\$0	\$1,573
00012H Engineer 7	U.C. per mnhr ->	12						
		1	00012H	150.14	\$0	\$0	\$0	150.14
		12	1.000	\$1,802	\$0	\$0	\$0	\$1,802
00009H Engineer 4	U.C. per mnhr ->	24						
		1	00009H	83.46	\$0	\$0	\$0	83.46
		24	1.000	\$2,003	\$0	\$0	\$0	\$2,003
00010H Engineer 5	U.C. per mnhr ->	45						
		1	00010H	100.13	\$0	\$0	\$0	100.13
		45	1.000	\$4,506	\$0	\$0	\$0	\$4,506
00017H Designer 4	U.C. per mnhr ->	44						
		1	00017H	92.22	\$0	\$0	\$0	92.22
		44	1.000	\$4,058	\$0	\$0	\$0	\$4,058
<b>TOTAL B-02-12000 Prelim. Plans -Roadway Design</b>		<b>134</b>		<b>\$13,941</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$13,941</b>

Company

04/27/2005

Title  
Subject  
Author  
Manager

**DETAIL REPORT NO.1A**  
Reported From: 000000 Powers Ferry Rd Bridge Rel  
Report Total: \$374,720

LEVEL

	QTY	Hrs	Crew/ProdFact	LABOR	MATERIAL	EQUIPMENT	OTHERS	TOTAL
<b>B-02-13000 Prelim. Plans -Bridge Design</b>								
00013H Engineer 8	18	1	00013H	174.74	Tree Depth= 3			174.74
		18	1,000	\$3,145		\$0	\$0	\$3,145
00012H Engineer 7	64	1	00012H	150.14				150.14
		64	1,000	\$9,609		\$0	\$0	\$9,609
00010H Engineer 5	44	1	00010H	100.13				100.13
		44	1,000	\$4,406		\$0	\$0	\$4,406
00012H Engineer 7	4	1	00012H	150.14				150.14
		4	1,000	\$601		\$0	\$0	\$601
<b>TOTAL B-02-13000 Prelim. Plans -Bridge Design</b>				130	\$17,761	\$0	\$0	\$17,761

Estimate Tree Structure Rollups  
000000 Powers Ferry Rd Bridge Replacement  
B-02-00000 Preliminary Plans

**B-02-14000 Bridge Hydraulics Design**

00013H Engineer 8	1	1	00013H	174.74	Tree Depth= 3			174.74
		1	1,000	\$175		\$0	\$0	\$175
<b>TOTAL B-02-14000 Bridge Hydraulics Design</b>				1	\$175	\$0	\$0	\$175

Estimate Tree Structure Rollups  
000000 Powers Ferry Rd Bridge Replacement  
B-02-00000 Preliminary Plans

**B-02-15000 Prelim. Plans -Existing Hydraulic Model Comp**

00012H Engineer 7	12	1	00012H	150.14	Tree Depth= 3			150.14
		12	1,000	\$1,802		\$0	\$0	\$1,802

Company

04/27/2005

Title  
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Manager

**DETAIL REPORT NO.1A**  
Reported From: 000000 Powers Ferry Rd Bridge Rel  
Report Total: \$374,720

LEVEL

	QTY	Hrs	Crew/ProdFact	LABOR	MATERIAL	EQUIPMENT	OTHERS	TOTAL
<b>B-02-15000 Prelim. Plans -Existing Hydraulic Model Comp</b>								
00011H Engineer 6	17	1	00011H	123.11	Tree Depth= 3			\$374,720
		17	1,000	\$2,093	000000 Powers Ferry Rd Bridge Relplacement			\$101,147
					B-02-00000 Preliminary Plans			
<b>TOTAL B-02-15000 Prelim. Plans -Existing Hydraulic Model Completion</b>		<b>29</b>		<b>\$3,895</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,895</b>

Estimate Tree Structure Rollups  
000000 Powers Ferry Rd Bridge Relplacement  
B-02-00000 Preliminary Plans

<b>B-02-16000 Prelim. Plans -Proposed Hydraulic Model Comp</b>								
00012H Engineer 7	20	1	00012H	150.14	Tree Depth= 3			\$374,720
		20	1,000	\$3,003	000000 Powers Ferry Rd Bridge Relplacement			\$101,147
					B-02-00000 Preliminary Plans			
00011H Engineer 6	23	1	00011H	123.11				150.14
		23	1,000	\$2,832				\$3,003
<b>TOTAL B-02-16000 Prelim. Plans -Proposed Hydraulic Model Completion</b>		<b>43</b>		<b>\$5,834</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$5,834</b>

Estimate Tree Structure Rollups  
000000 Powers Ferry Rd Bridge Relplacement  
B-02-00000 Preliminary Plans

<b>B-02-17000 Prelim. Plans -Scour Evaluation</b>								
00012H Engineer 7	16	1	00012H	150.14	Tree Depth= 3			\$374,720
		16	1,000	\$2,402	000000 Powers Ferry Rd Bridge Relplacement			\$101,147
					B-02-00000 Preliminary Plans			
								150.14
								\$2,402

Company

04/27/2005

Title  
Subject  
Author  
Manager

# DETAIL REPORT NO 1A Reported From: 000000 Powers Ferry Rd Bridge Rel Report Total: \$374,720

LEVEL

QTY	Hrs	Crew/ProdFact	LABOR	MATERIAL	EQUIPMENT	OTHERS	TOTAL
<b>B-02-17000 Prelim. Plans -Scour Evaluation</b>							
Subcontractor: Eng-AIM							
00011H Engineer 6	15		1 00011H 15 1.000	123.11 \$1,847			\$374,720 \$101,147
U.C. per mnhr ->							
Tree Depth= 3							
TOTAL B-02-17000 Prelim. Plans -Scour Evaluation							
	31			\$4,249	\$0	\$0	\$4,249

Estimate Tree Structure Rollups  
000000 Powers Ferry Rd Bridge Relplacement  
B-02-00000 Preliminary Plans

## **B-02-18000 Prelim. Plans -Final Geotech Report (include**

Subcontractor: Eng-Wsh							
00012H Engineer 7	4		1 00012H 4 1.000	150.14 \$601			\$374,720 \$101,147
U.C. per mnhr ->							
Tree Depth= 3							
TOTAL B-02-18000 Prelim. Plans -Final Geotech Report							
(includes BFI)							
	4			\$601	\$0	\$0	\$601

Estimate Tree Structure Rollups  
000000 Powers Ferry Rd Bridge Relplacement  
B-02-00000 Preliminary Plans

## **B-02-19000 Prelim. Plans -Utility Coordination**

Subcontractor: Eng-Wsh							
00013H Engineer 8	2		1 00013H 2 1.000	174.74 \$349			\$374,720 \$101,147
U.C. per mnhr ->							
Tree Depth= 3							
Subcontractor: Eng-Wsh							
00012H Engineer 7	1		1 00012H 1 1.000	150.14 \$150			174.74 \$349
U.C. per mnhr ->							
TOTAL B-02-19000 Prelim. Plans -Utility Coordination							
(includes BFI)							
	3			\$0	\$0	\$0	150.14 \$150

Company

04/27/2005

Title  
Subject  
Author  
Manager

**DETAIL REPORT NO.1A**  
Reported From: 000000 Powers Ferry Rd Bridge Rel  
Report Total: \$374,720

LEVEL

	QTY	Hrs	Crew/ProdFact	LABOR	MATERIAL	EQUIPMENT	OTHERS	TOTAL
<b>B-02-19000 Prelim. Plans -Utility Coordination</b>								
00009H Engineer 4	6	1	00009H	83.46	Tree Depth= 3			
		6	1.000	\$501				
<b>TOTAL B-02-19000 Prelim. Plans -Utility Coordination</b>								
		9		\$1,000	\$0	\$0	\$0	\$1,000
								\$374,720
								\$101,147

<b>B-02-20000 Prelim. Plans -Quantities and Detailed Estim</b>								
00013H Engineer 8	2	1	00013H	174.74	Tree Depth= 3			
		2	1.000	\$349				
00012H Engineer 7	1	1	00012H	150.14				
		1	1.000	\$150				
00009H Engineer 4	6	1	00009H	83.46				
		6	1.000	\$501				
00010H Engineer 5	11	1	00010H	100.13				
		11	1.000	\$1,101				
00031H Scheduler	2	1	00031H	103.84				
		2	1.000	\$208				
00012H Engineer 7	4	1	00012H	150.14				
		4	1.000	\$601				
<b>TOTAL B-02-20000 Prelim. Plans -Quantities and Detailed Estimate</b>								
		26		\$2,910	\$0	\$0	\$0	\$2,910
								\$374,720
								\$101,147

Company

04/27/2005

Title  
Subject  
Author  
Manager

**DETAIL REPORT NO.1A**  
Reported From: 000000 Powers Ferry Rd Bridge Rel  
Report Total: \$374,720

LEVEL

	QTY	Hrs	Crew/ProdFact	LABOR	MATERIAL	EQUIPMENT	OTHERS	TOTAL
<b>B-02-21000 Prelim. Plans -Preliminary Special Provision</b>								
00013H Engineer 8	U.C. per mnhr ->	2	1	00013H	Estimate Tree Structure Rollups 000000 Powers Ferry Rd Bridge Relplacement B-02-00000 Preliminary Plans			\$374,720
					Tree Depth= 3			\$101,147
00012H Engineer 7					174.74			
					\$349	\$0	\$0	174.74
							\$0	\$349
	U.C. per mnhr ->	1	1	00012H	150.14			150.14
					\$150	\$0	\$0	\$150
<b>TOTAL B-02-21000 Prelim. Plans -Preliminary Special Provisions</b>								
			3		\$500	\$0	\$0	\$500

Estimate Tree Structure Rollups  
000000 Powers Ferry Rd Bridge Relplacement  
B-02-00000 Preliminary Plans

<b>B-02-22000 Prelim. Plans -QA/QC/Independent Plan Review</b>								
00013H Engineer 8	U.C. per mnhr ->	4	1	00013H	Estimate Tree Structure Rollups 000000 Powers Ferry Rd Bridge Relplacement B-02-00000 Preliminary Plans			\$374,720
					Tree Depth= 3			\$101,147
00012H Engineer 7					174.74			
					\$699	\$0	\$0	174.74
							\$0	\$699
00009H Engineer 4	U.C. per mnhr ->	8	1	00012H	150.14			150.14
					\$1,201	\$0	\$0	\$1,201
00010H Engineer 5	U.C. per mnhr ->	4	1	00009H	83.46			83.46
					\$334	\$0	\$0	\$334
00017H Designer 4	U.C. per mnhr ->	7	1	00010H	100.13			100.13
					\$701	\$0	\$0	\$701
	U.C. per mnhr ->	8	1	00017H	92.22			92.22
					\$738	\$0	\$0	\$738
<b>TOTAL B-02-22000 Prelim. Plans -QA/QC/Independent Plan Review</b>								
			31		\$3,673	\$0	\$0	\$3,673

Company

04/27/2005

Title  
Subject  
Author  
Manager

# DETAIL REPORT NO.1A Reported From: 000000 Powers Ferry Rd Bridge Rel Report Total: \$374,720

LEVEL

	QTY	Hrs	Crew/Prod/Fact	LABOR	MATERIAL	EQUIPMENT	OTHERS	TOTAL
<b>B-02-23000 Prelim. Plans -Preliminary Field Plan Review</b>								
00013H Engineer 8	U.C. per mnhr → 4	1	00013H	174.74	Tree Depth= 3			
		4	4	1,000	\$699	\$0	\$0	\$174.74
00009H Engineer 4	U.C. per mnhr → 4	1	00009H	83.46	\$334	\$0	\$0	\$174.74
00010H Engineer 5	U.C. per mnhr → 15	1	00010H	100.13	\$1,502	\$0	\$0	\$1,502
00017H Designer 4	U.C. per mnhr → 4	1	00017H	92.22	\$369	\$0	\$0	\$92.22
<b>TOTAL B-02-23000 Prelim. Plans -Preliminary Field Plan Review</b>				27	\$2,904	\$0	\$0	\$2,904

<b>B-02-24000 Prelim. Plans -Design Coordination</b>								
00013H Engineer 8	U.C. per mnhr → 4	1	00013H	174.74	Tree Depth= 3			
		4	4	1,000	\$699	\$0	\$0	\$174.74
<b>TOTAL B-02-24000 Prelim. Plans -Design Coordination</b>				4	\$699	\$0	\$0	\$699

## **C-03-11000 ROW Plan -Prepare ROW Plans**

00009H Engineer 4	U.C. per mnhr → 4	1	00009H	83.46	Tree Depth= 3			
		4	4	1,000	\$334	\$0	\$0	\$83.46
<b>TOTAL C-03-11000 ROW Plan -Prepare ROW Plans</b>				4	\$334	\$0	\$0	\$334

Company

04/27/2005

Title  
Subject  
Author  
Manager

DETAIL REPORT NO.1A  
Reported From: 000000 Powers Ferry Rd Bridge Rel  
Report Total: \$374,720

LEVEL

	QTY	Hrs	Crew/ProdFact	LABOR	MATERIAL	EQUIPMENT	OTHERS	TOTAL
<b>C-03-11000 ROW Plan -Prepare ROW Plans</b>								
00010H Engineer 5	U.C. per mnhr → 5	1	00010H 5	1,000	Tree Depth= 3 100.13 \$501	\$0	\$0	100.13 \$501
00017H Designer 4	U.C. per mnhr → 8	1	00017H 8	1,000	92.22 \$738	\$0	\$0	92.22 \$738
00012H Engineer 7	U.C. per mnhr → 5	1	00012H 5	1,000	150.14 \$751	\$0	\$0	150.14 \$751
TOTAL C-03-11000 ROW Plan -Prepare ROW Plans				22	\$2,323	\$0	\$0	\$2,323

Estimate Tree Structure Rollups  
000000 Powers Ferry Rd Bridge Relplacement  
C-03-00000 ROW Plan

<b>C-03-12000 ROW Plan -QA/QC ROW Plans</b>								
00012H Engineer 7	U.C. per mnhr → 1	1	00012H 1	1,000	Tree Depth= 3 150.14 \$150	\$0	\$0	150.14 \$150
00010H Engineer 5	U.C. per mnhr → 4	1	00010H 4	1,000	100.13 \$401	\$0	\$0	100.13 \$401
TOTAL C-03-12000 ROW Plan -QA/QC ROW Plans				5	\$551	\$0	\$0	\$551

Estimate Tree Structure Rollups  
000000 Powers Ferry Rd Bridge Relplacement  
C-03-00000 ROW Plan

<b>C-03-13000 ROW Plan -Field Plan Review</b>								
00010H Engineer 5	U.C. per mnhr → 3	1	00010H 3	1,000	Tree Depth= 3 100.13 \$300	\$0	\$0	100.13 \$300

Company

04/27/2005



Title  
Subject  
Author  
Manager

# DETAIL REPORT NO.1A Reported From: 000000 Powers Ferry Rd Bridge Rel Report Total: \$374,720

LEVEL	QTY	Hrs	Crew/ProdFact	LABOR	MATERIAL	EQUIPMENT	OTHERS	TOTAL
				Estimate Tree Structure Rollups 000000 Powers Ferry Rd Bridge Replacement C-03-00000 ROW Plan				\$374,720 \$4,790

## C-03-13000 ROW Plan -Field Plan Review

TOTAL C-03-13000 ROW Plan -Field Plan Review

3				\$300	\$0	\$0	\$0	\$300
Tree Depth= 3								

## C-03-14000 ROW Plan -ROW Plans Revisions

00010H Subcontractor: Eng-Wsh  
Engineer 5

U.C. per mnhr ->

1	1	00010H	100.13	\$100	\$0	\$0	\$0	100.13 \$100
Tree Depth= 3								

Estimate Tree Structure Rollups  
000000 Powers Ferry Rd Bridge Replacement  
C-03-00000 ROW Plan

\$374,720  
\$4,790

TOTAL C-03-14000 ROW Plan -ROW Plans Revisions

1				\$100	\$0	\$0	\$0	\$100
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## C-03-15000 ROW Plan -ROW Acquisition

00028H Subcontractor: Eng-Wsh  
ROW Acq. Manager

U.C. per mnhr ->

15	1	00028H	101.05	\$1,516	\$0	\$0	\$0	101.05 \$1,516
Tree Depth= 3								

Estimate Tree Structure Rollups  
000000 Powers Ferry Rd Bridge Replacement  
C-03-00000 ROW Plan

\$374,720  
\$4,790

TOTAL C-03-15000 ROW Plan -ROW Acquisition

15				\$1,516	\$0	\$0	\$0	\$1,516
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## D-04-11000 Final Plans -PUBLIC OUTREACH

00011H Subcontractor: Env-ERS  
Engineer 6

U.C. per mnhr ->

60	1	00011H	123.11	\$7,387	\$0	\$0	\$0	123.11 \$7,387
Tree Depth= 3								

Estimate Tree Structure Rollups  
000000 Powers Ferry Rd Bridge Replacement  
D-04-00000 Final Plans

\$374,720  
\$128,564

Company

04/27/2005

Success Estimating and Cost Management System

Title  
Subject  
Author  
Manager

**DETAIL REPORT NO.1A**  
Reported From: 000000 Powers Ferry Rd Bridge Rel  
Report Total: \$374,720

LEVEL	QTY	Hrs	Crew/ProdFact	LABOR	MATERIAL	EQUIPMENT	OTHERS	TOTAL
<b>D-04-11000 Final Plans -PUBLIC OUTREACH</b>								
00013H Engineer 8	U.C. per mnhr -> 3	1	00013H	174.74	Tree Depth= 3			\$374,720
		3	1,000	\$524				\$129,564
00027H Off. Manager	U.C. per mnhr -> 8	1	00027H	55.96				174.74
		8	1,000	\$448				\$524
TOTAL D-04-11000 Final Plans -PUBLIC OUTREACH				71	\$8,359	\$0	\$0	\$8,359

<b>D-04-12000 Final Plans -Roadway Design</b>								
00012H Engineer 7	U.C. per mnhr -> 3	1	00012H	150.14	Tree Depth= 3			\$374,720
		3	1,000	\$450				\$129,564
00009H Engineer 4	U.C. per mnhr -> 12	1	00009H	83.46				150.14
		12	1,000	\$1,002				\$450
00010H Engineer 5	U.C. per mnhr -> 18	1	00010H	100.13				83.46
		18	1,000	\$1,802				\$1,002
00017H Designer 4	U.C. per mnhr -> 8	1	00017H	92.22				100.13
		8	1,000	\$738				\$1,802
TOTAL D-04-12000 Final Plans -Roadway Design				41	\$3,992	\$0	\$0	\$3,992

Company

04/27/2005

Title  
Subject  
Author  
Manager

**DETAIL REPORT NO.1A**  
Reported From: 000000 Powers Ferry Rd Bridge Rel  
Report Total: \$374,720

LEVEL

	QTY	Hrs	Crew/Prod/Fact	LABOR	MATERIAL	EQUIPMENT	OTHERS	TOTAL
<b>D-04-13000 Final Plans -Bridge Design</b>								
00013H Engineer 8	U.C. per mnhr → 8	1	00013H	174.74	000000 Powers Ferry Rd Bridge Relplacement D-04-00000 Final Plans			\$374,720
		8	1,000	\$1,398				\$129,564
00012H Engineer 7	U.C. per mnhr → 212	1	00012H	150.14				174.74
		212	1,000	\$31,830				\$1,398
00011H Engineer 6	U.C. per mnhr → 456	1	00011H	123.11				150.14
		456	1,000	\$56,138				\$31,830
<b>TOTAL D-04-13000 Final Plans -Bridge Design</b>				676	\$89,366	\$0	\$0	\$89,366

Estimate Tree Structure Rollups  
000000 Powers Ferry Rd Bridge Relplacement  
D-04-00000 Final Plans

**D-04-14000 Final Plans -Bridge Hydraulics Design**

00013H Engineer 8	U.C. per mnhr → 1	1	00013H	174.74				\$374,720
		1	1,000	\$175				\$129,564
<b>TOTAL D-04-14000 Final Plans -Bridge Hydraulics Design</b>				1	\$175	\$0	\$0	\$175

Tree Depth= 3

Estimate Tree Structure Rollups  
000000 Powers Ferry Rd Bridge Relplacement  
D-04-00000 Final Plans

**D-04-15000 Final Plans -Hydraulic Study Completion**

00012H Engineer 7	U.C. per mnhr → 30	1	00012H	150.14				\$374,720
		30	1,000	\$4,504				\$129,564
<b>TOTAL D-04-15000 Final Plans -Hydraulic Study Completion</b>				1	\$4,504	\$0	\$0	\$4,504

Tree Depth= 3

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**Subject**  
**Author**  
**Manager**

**DETAIL REPORT NO.1A**  
 Reported From: 000000 Powers Ferry Rd Bridge Rel  
 Report Total: \$374,720

**LEVEL**

	QTY	Hrs	Crew/ProdFact	LABOR	MATERIAL	EQUIPMENT	OTHERS	TOTAL
<b>D-04-15000 Final Plans -Hydraulic Study Completion</b>								
00011H Engineer 6	25	25	1	00011H 123.11 \$3,078	Estimate Tree Structure Rollups 000000 Powers Ferry Rd Bridge Replacement D-04-00000 Final Plans			\$374,720 \$128,564
Subcontractor: Eng-Allm								
TOTAL D-04-15000 Final Plans -Hydraulic Study Completion								
		55		\$7,582	\$0	\$0	\$0	\$7,582

Estimate Tree Structure Rollups  
 000000 Powers Ferry Rd Bridge Replacement  
 D-04-00000 Final Plans

**D-04-16000 Final Plans -Utility Coordination**

00013H Engineer 8	3	3	1	00013H 174.74 \$524	Tree Depth= 3			\$374,720 \$128,564
Subcontractor: Eng-Wsh								
00010H Engineer 5	1	1	1	00010H 100.13 \$100		\$0	\$0	174.74 \$524
Subcontractor: Eng-Wsh								
00017H Designer 4	6	6	1	00017H 92.22 \$553		\$0	\$0	100.13 \$100
Subcontractor: Eng-Wsh								
TOTAL D-04-16000 Final Plans -Utility Coordination								
		10		\$1,178	\$0	\$0	\$0	92.22 \$553

Estimate Tree Structure Rollups  
 000000 Powers Ferry Rd Bridge Replacement  
 D-04-00000 Final Plans

**D-04-17000 Final Plans -Qtys. & Detailed Estimate**

00013H Engineer 8	3	3	1	00013H 174.74 \$524	Tree Depth= 3			\$374,720 \$128,564
Subcontractor: Eng-Wsh								
00012H Engineer 7	4	4	1	00012H 150.14 \$601		\$0	\$0	174.74 \$524
Subcontractor: Eng-Wsh								
TOTAL D-04-17000 Final Plans -Qtys. & Detailed Estimate								
		7		\$1,125	\$0	\$0	\$0	150.14 \$601

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# DETAIL REPORT NO.1A Reported From: 000000 Powers Ferry Rd Bridge Rel Report Total: \$374,720

LEVEL

	QTY	Hrs	Crew/ProdFact	LABOR	MATERIAL	EQUIPMENT	OTHERS	TOTAL
<b>D-04-17000 Final Plans -Qtys. &amp; Detailed Estimate</b>								
00030H Cost Estimator	4	1	00030H	95.83	Tree Depth= 3			\$374,720
		4	1,000	\$383	000000 Powers Ferry Rd Bridge Replacement			\$129,564
					D-04-00000 Final Plans			
00031H Scheduler	2	1	00031H	103.84				95.83
		2	1,000	\$208				\$383
								103.84
								\$208
TOTAL D-04-17000 Final Plans -Qtys. & Detailed Estimate				13	\$1,716	\$0	\$0	\$1,716

<b>D-04-18000 Final Plans -Final Special Provisions</b>								
00013H Engineer 8	4	1	00013H	174.74	Tree Depth= 3			\$374,720
		4	1,000	\$699	000000 Powers Ferry Rd Bridge Replacement			\$129,564
					D-04-00000 Final Plans			
00012H Engineer 7	1	1	00012H	150.14				174.74
		1	1,000	\$150				\$699
								150.14
								\$150
00010H Engineer 5	4	1	00010H	100.13				100.13
		4	1,000	\$401				\$401
								100.13
								\$401
TOTAL D-04-18000 Final Plans -Final Special Provisions				9	\$1,250	\$0	\$0	\$1,250

<b>D-04-19000 Final Plans -QA/QC/Independent Plan Review</b>								
00013H Engineer 8	4	1	00013H	174.74	Tree Depth= 3			\$374,720
		4	1,000	\$699	000000 Powers Ferry Rd Bridge Replacement			\$129,564
					D-04-00000 Final Plans			
								174.74
								\$699
								174.74
								\$699

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DETAIL REPORT NO.1A  
Reported From: 000000 Powers Ferry Rd Bridge Rel  
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LEVEL

	QTY	Hrs	Crew/ProdFact	LABOR	MATERIAL	EQUIPMENT	OTHERS	TOTAL
<b>D-04-19000 Final Plans -QA/QC/Independent Plan Review</b>								
00012H Engineer 7	1	1	1	00012H U.C. per mnhr →	150.14 Tree Depth= 3			\$374.720
00009H Engineer 4	2	2	2	00009H U.C. per mnhr →	\$150	\$0	\$0	\$128.564
00010H Engineer 5	4	4	4	00010H U.C. per mnhr →	83.46 \$167	\$0	\$0	150.14 \$150
00017H Designer 4	4	4	4	00017H U.C. per mnhr →	100.13 \$401	\$0	\$0	83.46 \$167
<b>TOTAL D-04-19000 Final Plans -QA/QC/Independent Plan Review</b>								
		15		\$1,785	\$0	\$0	\$0	\$1,785

Estimate Tree Structure Rollups  
000000 Powers Ferry Rd Bridge Replacement  
D-04-00000 Final Plans

**D-04-20000 Final Plans -Final Field Plan Review**

00013H Engineer 8	8	8	8	00013H U.C. per mnhr →	174.74 Tree Depth= 3			\$374.720
00012H Engineer 7	9	9	9	00012H U.C. per mnhr →	\$1,398	\$0	\$0	\$128.564
00010H Engineer 5	1	1	1	00010H U.C. per mnhr →	150.14	\$0	\$0	174.74 \$1,398
00009H Engineer 4	2	2	2	00009H U.C. per mnhr →	\$1,351	\$0	\$0	150.14 \$1,351
<b>TOTAL D-04-20000 Final Plans -Final Field Plan Review</b>								
		20		\$1,785	\$0	\$0	\$0	\$1,785

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# DETAIL REPORT NO.1A Reported From: 000000 Powers Ferry Rd Bridge Rel Report Total: \$374,720

LEVEL

	QTY	Hrs	Crew/ProdFact	LABOR	MATERIAL	EQUIPMENT	OTHERS	TOTAL
<b>D-04-22000 Final Plans -Construction Schedule</b>								
00006H Engineer 5	34	1	00006H 34	100.13 1,000	Tree Depth= 3 100.13 \$3,404	\$0	\$0	100.13 \$3,404
Subcontractor: Eng-Wsh								
TOTAL D-04-22000 Final Plans -Construction Schedule								
	34			\$3,404	\$0	\$0	\$0	\$3,404

Estimate Tree Structure Rollups  
000000 Powers Ferry Rd Bridge Replacment  
D-04-00000 Final Plans

## **D-04-23000 Final Plans -Construction Documents**

00013H Engineer 8	8	1	00013H 8	174.74 1,000	Tree Depth= 3 174.74 \$1,398	\$0	\$0	174.74 \$1,398
Subcontractor: Eng-Wsh								
00032H Res. Engineer	2	1	00032H 2	105.3 1,000	105.3 \$211	\$0	\$0	105.3 \$211
Subcontractor: Eng-Wsh								
TOTAL D-04-23000 Final Plans -Construction Documents								
	10			\$1,609	\$0	\$0	\$0	\$1,609

Estimate Tree Structure Rollups  
000000 Powers Ferry Rd Bridge Replacment  
E-05-00000 Construction Services

## **E-05-10000 Construction Services -Bid Evaluation**

00032H Res. Engineer	6	1	00032H 6	105.3 1,000	Tree Depth= 3 105.3 \$632	\$0	\$0	105.3 \$632
Subcontractor: Eng-Wsh								
00012H Engineer 7	2	1	00012H 2	150.14 1,000	150.14 \$300	\$0	\$0	150.14 \$300
Subcontractor: Eng-Wsh								
TOTAL E-05-10000 Construction Services -Bid Evaluation								
	8			\$932	\$0	\$0	\$0	\$932

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**DETAIL REPORT NO.1A**

Reported From: 000000 Powers Ferry Rd Bridge Rel  
Report Total: \$374,720

## LEVEL

	QTY	Hrs.	Crew/Prod/Fact	LABOR	MATERIAL <i>Estimate Tree Structure Rollups</i>	EQUIPMENT	OTHERS	TOTAL
<b>E-05-11000 Construction Services -Construction Services</b>								
00013H Engineer 8	U.C. per mnhr → 8	1	00013H 1,000	174.74 \$1,398	\$0	\$0	\$0	\$174.74 \$1,398
00017H Designer 4	U.C. per mnhr → 4	1	00017H 1,000	92.22 \$369	\$0	\$0	\$0	92.22 \$369
00009H Engineer 4	U.C. per mnhr → 8	1	00009H 1,000	83.46 \$668	\$0	\$0	\$0	83.46 \$668
00032H Res. Engineer	U.C. per mnhr → 86	1	00032H 1,000	105.3 \$9,056	\$0	\$0	\$0	105.3 \$9,056
00011H Engineer 6	U.C. per mnhr → 28	1	00011H 1,000	123.11 \$3,447	\$0	\$0	\$0	123.11 \$3,447
00013H Engineer 8	U.C. per mnhr → 2	1	00013H 1,000	174.74 \$349	\$0	\$0	\$0	174.74 \$349
00027H Off. Manager	U.C. per mnhr → 96	1	00027H 1,000	55.96 \$5,372	\$0	\$0	\$0	55.96 \$5,372
00006H Engineer 5	U.C. per mnhr → 30	1	00006H 1,000	100.13 \$3,004	\$0	\$0	\$0	100.13 \$3,004
<b>TOTAL E-05-11000 Construction Services -Construction Services</b>				<b>262</b>	<b>\$23,663</b>	<b>\$0</b>	<b>\$0</b>	<b>\$23,663</b>

**E-05-11011 Final Plans -Bridge Shop Drawing**  
00013H  
Submitted as E-11011

00013H  
Engineer R

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**DETAIL REPORT NO.1A**  
Reported From: 000000 Powers Ferry Rd Bridge Rel  
Report Total: \$374,720

LEVEL

	QTY	Hrs	Crew/ProdFact	LABOR	MATERIAL	EQUIPMENT	OTHERS	TOTAL
<b>E-05-11011 Final Plans -Bridge Shop Drawing</b>								
00010H Engineer 5	20	1	00010H	100.13	000000 Powers Ferry Rd Bridge Relplacement E-05-00000 Construction Services			\$374,720 \$26,947
		20	1.000	\$2,003				
					Tree Depth= 3			100.13 \$2,003
<b>TOTAL E-05-11011 Final Plans -Bridge Shop Drawing</b>		22		\$2,352				\$2,352

**F-06-10000 Meetings\Coordination\Controls-Project Coord**

00031H Project Controls Mngr. (Scheduler)	128	1	00031H	103.84	000000 Powers Ferry Rd Bridge Relplacement F-06-00000 Meetings\Coordination\Controls			\$374,720 \$22,309
		128	1.000	\$13,292				
00027H Off. Manager	45	1	00027H	55.96				103.84 \$13,292
		45	1.000	\$2,518				
00018H Procurement (CAD Draftsman 3)	24	1	00018H	65.33				55.96 \$2,518
		24	1.000	\$1,568				
00017H Contracts (Designer 4)	8	1	00017H	92.22				65.33 \$1,568
		8	1.000	\$738				
00013H Project Mngr (Engineer 8)	24	1	00013H	174.74				92.22 \$738
		24	1.000	\$4,194				
<b>TOTAL F-06-10000 Meetings\Coordination\Controls-Project Coordination</b>		229		\$22,309				\$22,309

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# LABOR RESOURCE REPORT

Reported From: 000000 Powers Ferry Rd Bridge Relplacement

Code	Description	Base Rate \$/Hr	Extended Rate \$/Hr	Hours	Crew Adjustments	Direct Cost Labor	Total Cost Labor
00006H	Engineer 5	\$100.13	\$100.13	254	\$0	\$25,433	\$25,433
00009H	Engineer 4	\$83.46	\$83.46	144	\$0	\$12,018	\$12,018
00010H	Engineer 5	\$100.13	\$100.13	304	\$0	\$30,440	\$30,440
00011H	Engineer 6	\$123.11	\$123.11	850	\$0	\$104,644	\$104,644
00012H	Engineer 7	\$150.14	\$150.14	497	\$0	\$74,620	\$74,620
00013H	Engineer 8	\$174.74	\$174.74	211	\$0	\$36,870	\$36,870
00017H	Designer 4	\$92.22	\$92.22	105	\$0	\$9,683	\$9,683
00018H	CAD Draftsman 3	\$65.33	\$65.33	192	\$0	\$12,543	\$12,543
00023H	Land Survey	\$97.96	\$97.96	60	\$0	\$5,878	\$5,878
00025H	3 Man Crew	\$159.02	\$159.02	85	\$0	\$13,517	\$13,517
00027H	Off. Manager	\$55.96	\$55.96	173	\$0	\$9,681	\$9,681
00028H	ROW Acq. Manager	\$101.05	\$101.05	15	\$0	\$1,516	\$1,516
00030H	Cost Estimator	\$95.83	\$95.83	12	\$0	\$1,150	\$1,150
00031H	Scheduler	\$103.84	\$103.84	138	\$0	\$14,330	\$14,330
00032H	Res. Engineer	\$105.30	\$105.30	94	\$0	\$9,898	\$9,898
<b>Total Labor Cost</b>				<b>3,134</b>	<b>\$0</b>	<b>\$362,220</b>	<b>\$362,220</b>

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# BILL OF MATERIAL REPORT

Reported From:  
000000 Powers Ferry Rd Bridge Relplacem

Code	Description	Qty	UM	Direct Material		Markups	Total
				Unit Cost	Cost		
<b>10</b>							
100000	Materials and Supplies	1	ls	3000.00	\$3,000	\$0	\$3,000
Category 10 Subtotal					\$3,000	\$0	\$3,000
<b>20</b>							
200000	Drilling	1	ls	9500.00	\$9,500	\$0	\$9,500
Category 20 Subtotal					\$9,500	\$0	\$9,500
<b>TOTAL</b>					\$12,500	\$0	\$12,500

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